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Establishment of thermodynamic equilibrium in a cosmological model with arbitrary acceleration

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Abstract

We build a strict mathematical model of thermodynamic equilibrium establishment in an originally non-equilibrium cosmological ultrarelativistic plasma for an arbitrarily accelerated Universe under the assumption that scaling of elementary particle interactions is restored at energies above the unitary limit. It has been shown that in the case of a positive acceleration of the Universe, a thermodynamic equilibrium can never be completely restored. © 2013 Pleiades Publishing, Ltd.

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